

REMARKS

Reconsideration of the pending claims in view of the following remarks is respectfully requested. Entry of the present amendments is respectfully requested, since it will eliminate issues by clearly distinguishing from the cited references and place the application in condition for allowance. No new issue is presented and no new search is required by this amendment since the scope of the claims was previously considered and searched. It is believed that this amendment places the application in condition for allowance and will avoid the need for an appeal.

Claim 1, previously amended to specify that each of R, R' and R'' independently is -H or -L-B, has now been further amended to specify that L is a linking group selected from alkyleneoxy, thio, sulfonyl, sulfinyl, sulfoxyl, amido, oxyamido, alkylcarbamoyle, carbamoyle, sulfonylamido, aminosulfonyl, aminosulfonyl, aminosulfonylamido, hydrazinyl-sulfonyl, carboxyl, oxycarbonyl, carbonyl, carboxyhydrazinyl, amino, thiocarbonyl, sulfamoylamino, sulfamoyle, thiocarbamoyle, any one of said linking groups being substituted or unsubstituted. That is, Claim 1 has been amended to remove alkylene as a possible linking group of the oleophilising compound defined in claim 1.

Applicants thank Examiner Gilliam for indicating the allowability of the subject matter defined by Claim 5.

Rejection under 35 USC § 103(a) over Bozer et al (US 3,574,297) in view of Loccufier et al (EP 1157828)

Claims 1-4 and 6-9 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Bozer et al. in view of Loccufier et al. According to the Office Action, Bozer et al. teaches a process comprising the steps of applying, in a printing design, an alkenylsuccinic acid compound to a surface on a body having a base-reacting, water-insoluble material intimately present at the surface thereof, wherein the alkenyl chain has from 8 to 16 carbon atoms. The alkenylsuccinic acid compound is a succinic acid, succinic anhydride, soluble salt of succinic acid or succinyl halide (claims 1-5; column 3, line 52 – column 4, line 7). In the Example, a water solution containing 2.5 percent by weight on n-decenylsuccinic anhydride was prepared and

applied to an appropriate surface (column 6, lines 27-35). According to the Office Action, Bozer et al. suggests that the alkenylsuccinic acid compound can be applied in any manner that is deemed to be convenient including in any desired solvent, such as water, and from an orifice equipped apparatus (column 3, lines 27-68), but that there is no specific teaching to apply the compound via ink jet. According to the Office Action, it would have been obvious to one of ordinary skill in the art to apply the alkenylsuccinic acid compound via ink jet, based on the teachings of Loccufier et al. (abstract) with reasonable expectation of lowering cost and increasing reliability ([0007]). Further, the Office Action contends that it would have been obvious to adjust the surface tension of the alkenylsuccinic acid solution to be in the range of 20 to 60, preferably from 30 to 50 dynes/cm so that the solution is compatible with conventional ink jet printing systems based on the teachings of Loccufier et al. ([0042]).

In the response to the Office Action of May 26, 2005, Applicants argued that there is no disclosure in Bozer et al. of an oleophilising compound that falls within the definition of the formulae of the previous claim 1.

In response to the Applicants' arguments of June 16, 2005, the Examiner asserted that the alkenyl succinic acids described in Bozer et al. fall within the scope of the oleophilising compound defined in Claim 1.

For at least the following reasons, Applicants traverse the rejection.

Bozer et al. (US 3,574,297) is concerned with the use of certain alkenylsuccinic acid compounds (where succinic acid, succinic chloride, succinic anhydride, or soluble salt of succinic acid bears an alkenyl chain of from 8 to 16 carbon atoms as a substituent – see column 2, lines 52-56) to render hydrophobic a printable or printing surface having basic surface properties, when treated according to a printing design (column 1, lines 54-68). The treated printing surface can then be selectively wetted and inked and used in an offset printing process. It is stated in Bozer et al. that the alkenylsuccinic acid compound can be dissolved in a desired solvent, such as water, and applied by a brush, or from an orifice equipped apparatus such as a pen or pipette (column 3, lines 50-53) among other methods. There is no disclosure of applying the alkenylsuccinic acid compound to a printing surface via ink jet printing.

EP '828 (Loccufier et al.) is concerned with a method for preparing a lithographic printing plate by means of ink jet in which the ink jet fluid comprises an oleophilising compound containing a 1,3-dicarbonyl group in its chemical formula, which is capable of reacting with the surface of a lithographic receiver onto which the ink jet fluid may be dispensed in an information-wise fashion.

Claim 1, from which claims 2-4 and 6-9 depend, is directed toward a method for the preparation of a printing plate comprising inkjet printing an oleophilic image on a surface of a support by applying to the support an aqueous solution or aqueous colloidal dispersion of an oleophilising compound on the surface of the support and drying the applied solution or dispersion, such that on drying the area of the surface to which the solution or dispersion was applied becomes lithographic ink-accepting, characterised in that the oleophilising compound has the chemical structure



or



wherein each M is the same or different and independently selected from H or a cation; each of l, m and n independently is 0 or 1, provided that l+m+n = at least 1; each of R, R' and R'' independently is -H or -L-B; and

L is a linking group selected from alkyleneoxy, thio, sulfonyl, sulfinyl, sulfoxyl, amido, alkylamido, oxyamido, alkylcarbamoyl, carbamoyl, sulfonylamido, aminosulfonyl, aminosulfonylamido, hydrazinyl-sulfonyl, carboxyl, oxycarbonyl, carbonyl, carboxyhydrazinyl, amino, thiocarbonyl, sulfamoylamino, sulfamoyl, thiocarbamoyl, any one of said linking groups being substituted or unsubstituted; and B is a hydrophobic group comprising 8 or more carbon atoms, provided that at least one of R, R' and R'' is present and has the structure -L-B.

Claim 1 has been amended so as to remove the alkylene group as a linker group L, such that even 1-alkenyl succinic acids having alkenyl groups with a chain of greater than 9 carbon atoms would not create compound that fall within the scope of the claim. In view of the amendments now made to claim 1, it is submitted that none of the compounds mentioned in Bozer et al. falls within the scope of the formula in the claimed invention and there is no indication or suggestion in Bozer et

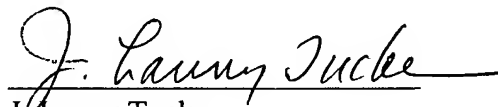
al. that would lead the skilled person to utilize a linker group according to amended claim 1 in the compounds described in Bozer et al.

Amended claim 1 requires that at least one of R, R' or R'' has the structure -L-B, where L is a linking group as defined above and B is a hydrophobic group comprising 8 or more carbon atoms. The skilled person in the art would not be led by the disclosure of Bozer et al. alone or in combination with Loccufier et al. to prepare a printing plate via ink jet application of a compound as defined according to amended claim 1, that has a linking group as defined (and not including an alkylene group) between the alkyl carboxylic acid moiety and a hydrophobic group (in the manner claimed) thereby providing the surprising benefit to the lithographic printing process of improved abrasion resistance and longer print run life such as that provided by the present invention. There is no indication or suggestion in Bozer et al. to utilize anything other than an alkenylsuccinic acid compound and no teaching to modify that compound in any way other than modifying the acid component to a chloride, anhydride or soluble salt. It is submitted therefore, that the current claim 1 is not obvious over Bozer et al. in view of Loccufier et al.

It is further submitted that claims 2-4 and 6-9 are not obvious by virtue of their dependency on patentable claim 1.

For at least the above reasons, reconsideration and withdrawal of the rejection are in order. Reconsideration of the above-identified patent application is respectfully requested. A prompt and favorable action by the Examiner is earnestly solicited. Should the Examiner require anything further, she is invited to contact the undersigned representative.

Respectfully submitted,



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